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THE USDA-ARS WORLD COLLECTION OF FLAX —
Index of Agronomic and Morphologic Characters,
Oil Content, and Oil Quality

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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
North Central Region

THE USDA-ARS WORLD COLLECTION OF FLAX-
Index of Agronomic and Morphologic Characters,
Oil Content, and Oil Quality

Compiled by,

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INTRODUCTION

The first accession to the USDA-ARS World Collection of Flax was accepted in 1912. During 1976-1977, 37 new lines were entered into the collection, 27 of Russian derivation, and 10 lines entered as standard procedure when submitted for testing in the Cooperative Regional Flax Trial. At present, there are 2262 accessions in the collection.

There has been a great amount of data accumulated over the past two decades describing various characteristics of varieties or lines in the collection. I have tried to record as much of this information as possible on computer cards and catalogue the information in general data areas. This technical report is the first attempt to release this information to those persons interested or needing data for their own research program.

The data is catalogued so that searches may be performed for a particular characteristic of interest. Also, any complete print-out of a data area may be requested. Those requests can be sent to my address.

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NUMERICAL LISTING OF THE FLAX WORLD COLLECTION

NAME	CI_NO	SOURCE	CCOUNTRY	YEAR	F_OR_S
DAMONT	3	1	NORTH DAKOTA	1912	S
N.D. RESISTANT 52	8	1	NORTH DAKOTA	1912	S
N.D. RES. 114 ECCLLEY-P	13	1	NORTH DAKOTA	1913	S
RESERVE	19	1	MONT.	1913	S
PUNJAB	20	3	INDIA	1913	S
JALAUN	21	3	INDIA	1913	S
LETHBRIDGE GOLDEN	23	2	CANADA	1913	S
OTTAWA WHITE FLOWER	24	2	CANADA	1913	S
WILLISTON GOLDEN	25	1	NORTH DAKOTA	1913	S
NOVA ROSSISK	27	3	RUSSIA	1913	S
CRETE	31	3	TURKEY	1913	S
SODDO WHITE	36	3	ABYSSINIA	1914	S
BOMBAY	42	3	INDIA	1914	S
MORYE	112	3	ARGENTINA	1915	S
CASILDA	114	3	ARGENTINA	1915	S
PILAR	119	3	ARGENTINA	1915	S
KOREAN	132	3	KGREA	1915	S
MONISTON	133	1	MONT.	1915	S
NOVELTY	140	2	CANADA	1915	S
NOVA ROSSISK SELECTION	142	1	MINNESOTA	1916	S
JALAUN SELECTION	156	3	INDIA	1916	S
ESCALADA	157	3	ARGENTINA	1917	S
PEHANJO	160	3	ARGENT.	1917	S
RES. X HOSHANGABAD	173	1	NORTH DAKOTA	1918	S
PALE BLUE SELECTION	176	1	NORTH DAKOTA	1919	S
CHIPPEWA	178	1	MINNESOTA	1919	S
BLUE DUTCH SELECTION	179	1	MINNESOTA	1919	S
BILLINGS	184	1	NORTH DAKOTA	1919	S
NEWLAND	188	1	NORTH DAKOTA	1919	S
N.D. NO. 43.012	241	1	NORTH DAKOTA	1921	S
LINQTA	244	1	NORTH DAKOTA	1921	S
BUDA SEL.	270	1	NORTH DAKOTA	1922	S
SLOPE	274	1	NORTH DAKOTA	1923	S
NO.DAK. RES. NC. 52	275	1	NORTH DAKOTA	1923	S
RIO	280	1	NORTH DAKOTA	1923	S
VOZ	295	3	RUSSIA	1923	S
ABYSSINIA (YELLOW)	300	3	ABYSSINIA	1924	S
ABYSSINIA (BROWN)	301	3	ABYSSINIA	1924	S
ABYSSINIA (BROWN)	302	3	ABYSSINIA	1924	S
USSURISK	303	3	MANCHUR.	1924	S

ALPHABETICAL LISTING OF THE FLAX WORLD COLLECTION

A listing of the Flax World Collection by alphabetical order has been valuable in locating lines requested by interested personnel (see Table 2 for example). Often these requests list only a name or cross and the present listing readily identifies whether the line is included in the collection and the C.I. number assigned.

ALPHABETICAL LISTING BY SOURCE AND COUNTRY

This listing groups the entries of the collection into three major categories (see Table 3 for example). In the first grouping are entries derived from the United States, in order by state, and then in alphabetical order by name. The second grouping has entries derived from Canada in alphabetical order by name. In the third grouping are entries derived from other foreign countries, in order by country, and then in alphabetical order by name. Entries identified by numbers are always listed last in the sequence.

ALPHABETICAL LISTING OF FLAX WORLD COLLECTION

NAME	CI_NO	SOURCE	CCOUNTRY	YEAR	F_OR_S
A/4 1/2 FIBER	1774	1	C & CF RES. BR.	1957	
A 1200	2581	3	CZECH.	1969	
ABYSSINIA (BROWN)	301	3	ABYSSINIA	1924	
ABYSSINIA (BROWN)	302	3	ABYSSINIA	1924	
ABYSSINIA (YELLOW)	300	3	ABYSSINIA	1924	
ABYSSINIAN BROWN	701	3	ABYSSINIA	1931	
ADOPTIVLGG	2312	3	GREECE	1962	S
AFGHANISTAN	2582	3	CZECH.	1969	S
AGR. 1-25-70 SEL.	853	1	NORTH DAKOTA	1936	
AGR. 1-25-70 SEL.	898	1	NORTH DAKOTA	1938	
AGRI	2454	3	TURKEY	1965	S
AH 811 FC 150 EEP2265	2833	3	ARGENTINA	1975	
AH 827-F5-30 EEP2296	2835	3	ARGENTINA	1975	
ALBUFEIRA	2666	3	FRANCE	1969	S
ALC-II-6	2584	3	CZECH.	1969	
ALC- II-2	2583	3	CZECH.	1969	
ALFA OLAJLEN	2585	3	CZECH.	1969	
ALSEE	2287	3	INDIA	1961	S
ALTAMURA	2313	3	GREECE	1962	S
AMALLA	2433	3	NORTH DAKOTA	1964	S
AMEC	1528	3	ETHIOPIA	1952	S
AM. (CROSS) SEL.	788	3	URUGUAY	1934	
AR.	1110	3	URUGUAY	1944	S
AR. (CROSS) SEL.	787	3	URUGUAY	1934	
ARAD	2391	3	HUNGARY	1963	S
ARG. CI 342 X B GOLDEN	943	1	MONTANA	1938	
ARG. 8C X B. GOLDEN	1166	2	CANADA	1948	
ARG191XBIS)X(VIKGBIS	1164	1	NORTH DAKOTA	1952	
ARG.191-BIS X VIK-EIS	1487	1	NORTH DAKOTA	1941	
ARG.404XBISON.B41-2760	1048	1	EGYPT	1926	S
ARGENTINE	379	3	MINNESOTA	1928	S
ARGENTINE	417	1	RUSSIA	1930	S
ARGENTINE	505	3	MINNESOTA	1928	S
ARGENTINE SELECTION	416	1	MINNESOTA	1928	
ARGENTINE SELECTION	462	1	MINNESOTA	1928	
ARGENTINE SELECTION	462-6	1	MINNESOTA	1928	
ARGENTINE SELECTION	463	1	MINNESOTA	1928	
ARGENTINE SELECTION	463-4	1	MINNESOTA	1928	
ARGENTINE SEL.	705	1	MONTANA	1932	
ARGENTINE SEL. G5	1112	1	CALIFORNIA	1944	

ALPHABETICAL LISTING BY SOURCE AND COUNTRY OR STATE

NAME	CI_NO	SOURCE	COUNTRY	YEAR	F_OR_S
P.I. 253973	2065		IRAQ	1959	
BEATALL	724		IRELAND	1932	F
J.W.S.	388		IRELAND	1927	F
LIRAL CROWN	882		IRELAND	1938	F
NO. 1	1650		IRELAND	1955	
NO. 2	1651		IRELAND	1955	
NO. 3	1652		IRELAND	1955	
NO. 4	1653		IRELAND	1955	
NO. 5	1654		IRELAND	1955	
NO. 6	1655		IRELAND	1955	
NO. 7	1656		IRELAND	1955	
NO. 8	1657		IRELAND	1955	
STORMONT GOSSAMER	728		IRELAND	1932	F
262522	2265		ISRAEL	1960	
262523	2266		ISRAEL	1960	
252525	2267		ISRAEL	1960	
262526	2268		ISRAEL	1960	
262527	2269		ISRAEL	1960	
CAPACE	2773		ITALY	1971	
MARSIC	2774		ITALY	1971	
TRENTO	2775		ITALY	1971	
NANSHO PI 194834	1504		JAPAN	1952	
SAGINO	500		JAPAN	1929	
SAGINO # 1 PI 1940:15	1505		JAPAN	1952	
SAGINO #2	1506		JAPAN	1952	
UNRYU	1507		JAPAN	1952	
J.W.S.	708-1		KENYA	1932	
KENYA	709		KENYA	1932	
KOREAN	132		KOREA	1915	
USSURISK	303		MANCHUR.	1924	
L.G. 0189B	1688		MOROCCO	1957	
L.G. 0195-4	1689		MOROCCO	1957	
NO. 11	1683		MOROCCO	1957	
NO. 129	1684		MOROCCO	1957	
NO. 205	1685		MOROCCO	1957	
NO. 547	1686		MOROCCO	1957	
NO. 548	1687		MOROCCO	1957	
RECOLTE	1548		MOROCCO	1957	
RECOLTE NO. 0189	1557		MOROCCO	1952	
RECOLTE NC. 0189	1592		MOROCCO	1952	
RECOLTE NC. 0196	1593		MOROCCO	1952	
1015	1690		MOROCCO	1957	

MORPHOLOGIC AND AGRONOMIC DATA

Many characteristics are included in this data describing various morphologic and agronomic characteristics of the entries in the Flax World Collection. A key to the data is the following:

Source

1st number	1	United States
	2	Canada
	3	South America
	4	Europe
	5	Mediterranean
	6	Middle East
	7	Far East
	8	Pacific
	9	Misc.

2nd number	1(U.S.)	1	Minnesota
		2	North Dakota
		3	South Dakota
		4	Montana
		5	California
		6	Texas
		7	Oregon
		8	North Carolina
		9	Unknown or Misc.

2(Can.)	1	Winnipeg, Manitoba
	2	Saskatoon, Sask.
	3	Indian Head, Sask.
	4	Ottawa, Ontario
	5	Lethbridge
	6	Edmonton, Alberta
	7	
	8	
	9	Unknown or Misc.

3(S.A.)	1	Argentina
	2	Brazil
	3	Uruguay
	4	
	5	
	6	Guatemala, Central America
	7	Costa Rica, Central America
	8	
	9	Misc.

4(Europe)	1	Germany
	2	France
	3	British Isle
	4	Netherlands
	5	Sweden-Norway
	6	Russia
	7	Hungary-Rumania
	8	Poland-Czechoslovakia
	9	Misc.

5(Mediterranean)	1	Yugoslavia	6(Middle East)	1	Turkey
	2	Bulgaria		2	Egypt
	3	Greece		3	Iraq
	4	Italy		4	Arabia-Persia (Iran)
	5	Spain-Portugal		5	
	6	Morocco		6	Siberia
	7	Algeria		7	Abyssinia (Ethiopia)
	8			8	Africa
	9	Misc.		9	Misc.
7(Far East)	1	India	8(Pacific)	1	Australia
	2	Pakistan		2	New Zealand
	3	Burma			
	4	Indo-China			
	5	China			
	6	Japan			
	7	Afghanistan			
	8				
	9	Misc.			

Plant Type

- 1 Fiber
- 2 Spring type seed flax
- 3 Winter type seed flax
- 4 Short, large seed, Indian seed flax
- 5 Ethiopian "forage" type
- 6 Mediterranean or Argentine seed flax

Anther, Filament, Style, Stigma, and Petal Color Intensity

- 1 Very light
- 2 Light
- 3 Medium
- 4 Dark
- 5 Very Dark

Anther, Filament, Style, Stigma, and Petal Color

- 1 White
- 2 Pink
- 3 Yellow
- 4 Blue
- 5 Lavender (Reddish blue)
- 6 Turquoise
- 7 Yellow-turquoise

Petal Width

in millimeters

Capsule Type

- 1 Indehiscent - no splitting of locules
- 2 Indehiscent - slight splitting of locules
- 3 Semi dehiscent - splits between locules
- 4 Semi dehiscent - pronounced splitting of locules
- 5 Dehiscent - boll splits open upon maturity

Pubescence of Boll Septations

- 1 Glabrous (no pubescence) on boll septations
- 2 Slight pubescence of boll septations
- 3 Pubescent

Seed Color

- 1 Very light yellow
- 2 Yellow
- 3 Greenish yellow
- 4 Dark greenish yellow or olive
- 5 Very dark olive
- 6 Light brown (reddish)
- 7 Medium brown
- 8 Dark brown

Seed Weight (grams per M)

Plant Height (inches)

St. Paul Wilt 1(resistant) - 9(very susceptible)

Other Wilt

Pasmo-leaf (av. of readings at Brookings & Watertown)

Pasmo-stem (av. of readings at Brookings & Watertown)

Rust - St. Paul 1 (immune) - 5 (susceptible)

Rust - Winnipeg

Anthracnose 1 (resistant)- 9 (susceptible)

Curly Top 1 (tolerant) - 9 (susceptible)

Aster Yellows 1 (tolerant) - 9 (susceptible)

Reaction to MCP 1 (tolerant) - 9 (sensitive)

Reaction to Dalapon 1 (tolerant) - 9 (sensitive)

OIL CONTENT AND QUALITY OF THE FLAX WORLD COLLECTION

The oil percentage, iodine value, linoleic fatty acid percentage, and linolenic fatty acid percentage are listed for most entries of the Flax World Collection (see Table 5 for sample). The order of listing is by the C.I. number assigned to each entry.

RANKING OF ENTRIES BY OIL PERCENTAGE

A listing of the entries having the highest oil content, with the percentage of linoleic and linolenic fatty acids, is valuable for breeders searching for sources of germplasm with high oil content (see Table 6 for example). The identification of the listing is by the C.I. number assigned to each entry. The entries with the highest oil percentage were C.I. 473 and C.I. 781. C.I. 473, sib 206, is a North Dakota entry and C.I. 781 is an Indian commercial line collected and entered via Minnesota in 1934.

OIL PERCENTAGE OF ENTRIES IN THE FLAX WORLD COLLECTION

C.I. No.	Source	Oil %	IV	Linoleic	Linolenic	Sap Val
3	1	40.9	191.1	12.0	58.6	187.5
8	1	38.4	188.8	13.2	57.0	188.2
20	1	42.8	180.2	8.0	54.0	188.2
21	1	39.1	175.2	12.1	52.8	188.2
23	1	40.1	190.4	10.0	59.0	188.3
24	1	39.6	185.2	10.4	50.0	188.5
31	1	42.5	182.4	11.8	54.4	187.7
36	1	41.0	193.6	11.6	57.5	187.8
42	1	43.0	187.4	14.5	60.7	188.0
114	1	37.7	191.2	10.9	58.8	189.0
132	1	41.2	191.2	14.0	56.2	186.4
133	1	44.8	189.6	14.0	57.2	186.5
140	1	41.4	185.3	13.0	54.5	186.8
156	1	40.4	179.4	10.0	55.5	188.6
157	1	43.6	185.5	8.8	58.4	185.8
173	1	43.8	180.6	9.8	55.2	189.2
176	1	42.1	190.4	15.4	55.8	188.0
184	1	40.9	185.5	11.9	54.3	188.3
188	1	41.6	194.3	12.0	55.9	186.6
244	1	38.4	191.2	13.8	56.1	185.8
270	1	40.4	188.5	13.1	53.6	186.3
274	1	38.9	190.9	16.0	59.6	188.4
280	1	42.2	187.7	10.7	57.7	189.2
295	1	39.4	182.9	12.5	56.7	188.9
300	1	37.0	189.1	10.1	57.3	189.5
301	1	38.2	194.3	10.4	59.3	186.8
302	1	39.2	190.6	13.6	60.6	188.8
303	1	38.8	192.2	10.4	58.8	187.2
320	1	40.5	188.5	13.2	57.1	186.6
321	1	41.1	184.2	11.4	52.8	188.9
323	1	41.1	182.6	11.6	52.3	189.3
323	1	39.3	183.3	11.3	53.3	183.9
324	1	39.0	184.6	9.2	54.2	193.4
325	1	41.2	189.2	12.3	56.8	187.0
326	1	40.2	190.4	12.1	57.1	187.1
327	1	40.0	181.6	10.2	52.5	186.6
333	1	36.1	184.6	11.0	54.5	184.9
333	1	40.5	191.4	10.9	57.9	186.7
341	1	39.8	184.4	10.5	56.1	186.7
342	1	43.1	187.4	10.2	57.5	190.1

RANKING OF ENTRIES BY OIL PERCENTAGE

C.I. No.	Source	Oil %	IV	Linoleic	Linolenic	Sap Val
473	1	45.8	187.1	11.0	58.1	192.8
781	1	45.4	183.2	10.4	57.9	187.9
721	1	44.9	186.7	10.0	59.4	188.4
133	1	44.8	189.6	14.0	57.2	188.5
1013	1	44.5	189.3	13.2	56.0	187.1
173	1	43.8	180.6	9.8	55.2	189.2
647	1	43.4	193.2	10.5	60.8	187.9
1081	1	43.4	192.4	12.4	57.9	189.9
1466	1	43.3	177.6	9.9	52.8	190.7
1265	1	43.2	184.2	11.9	54.4	189.0
342	1	43.1	187.4	10.2	57.5	190.1
698	1	43.1	180.3	11.6	52.1	187.6
1041	1	43.1	194.8	14.5	60.3	187.6
42	1	43.0	187.4	14.5	60.7	188.0
617	1	43.0	184.3	13.9	53.6	188.4
1356	1	43.0	184.6	10.9	53.9	192.0
1465	1	43.0	177.4	10.4	54.0	191.4
980	1	42.9	190.1	13.8	54.6	187.9
20	1	42.8	180.2	8.0	54.0	188.2
355	1	42.8	192.1	13.3	58.1	187.4
1082	1	42.6	190.8	13.2	56.1	190.8
1133	1	42.6	190.6	12.8	57.1	190.3
31	1	42.5	182.4	11.8	54.4	187.7
379	1	42.5	188.0	12.2	54.1	189.0
842	1	42.5	191.1	16.1	56.8	188.2
472	1	42.4	188.6	10.7	56.4	188.6
907	1	42.4	187.7	11.3	54.1	186.0
952	1	42.4	193.4	13.0	59.9	188.9
1364	1	42.4	187.6	10.2	54.2	183.8
1567	1	42.4	175.8	8.0	53.4	189.1
490	1	42.3	183.0	12.4	53.7	186.8
1348	1	42.3	183.4	10.6	53.9	189.1
1626	1	42.3	180.7	6.7	56.7	191.3
280	1	42.2	187.7	10.7	57.7	189.2
470	1	42.2	183.5	10.3	54.4	187.0
690	1	42.2	180.8	11.4	57.4	189.1
829	1	42.2	179.0	14.0	50.7	189.9
176	1	42.1	190.4	15.4	55.8	188.0
463	1	42.1	187.4	10.8	58.3	187.3
642	1	42.1	193.6	15.2	62.6	188.4

RANKING OF ENTRIES BY LINOLENIC FATTY ACID PERCENTAGE

A listing of the entries having the highest linolenic fatty acid percentage identified C.I. 637 and C.I. 958 as potential germplasm sources for use in breeding programs. C.I. 637 is an accession line from Russia, P.I. 91037, entered in 1931 and C.I. 958 is a Bolley Golden x Bison cross entered in 1938 from Montana (see page 19 for example).

RANKING OF ENTRIES BY LINOLEIC FATTY ACID PERCENTAGE

The listing of the entries having the highest linoleic fatty acid percentage indicate two accessions are over 18% linoleic acid (see Table 8 for example). C.I. 569 and C.I. 606 are both Russian introductions entered in the collection in 1931. C.I. 684 had both a high linoleic and linolenic acid percentage, and is a cross Saginaw x Ottawa 770B cross entered in the Collection from Minnesota.

RANKING OF ENTRIES BY LINOLENIC FATTY ACID PERCENTAGE

C. I. No.	Source	Oil %	IV	Linoleic	Linolenic	Sap Val
637	1	41.2	196.6	15.0	65.5	188.5
958	1	36.8	196.7	12.9	63.8	189.0
1499	1	39.6	191.5	9.0	63.1	189.0
684	1	39.4	198.2	17.6	63.0	187.3
976	1	40.4	191.2	11.8	63.0	189.7
716	1	40.9	195.6	17.3	62.9	188.0
642	1	42.1	193.6	15.2	62.6	188.4
1423	1	39.4	192.4	9.6	62.1	186.9
845	1	38.2	195.4	13.0	61.9	190.0
1118	1	40.2	192.0	13.6	61.5	187.5
1391	1	40.4	190.8	9.1	61.4	190.1
1127	1	41.1	195.3	15.7	61.2	189.0
687	1	40.5	195.0	12.0	61.2	189.8
1170	1	40.4	193.4	12.3	61.1	188.9
926	1	38.2	193.5	16.2	60.9	189.1
1634	1	40.8	192.2	8.6	60.9	186.7
647	1	43.4	193.2	10.5	60.7	187.9
42	1	43.0	187.4	14.5	60.8	188.0
302	1	39.2	190.6	13.6	60.6	188.8
643	1	42.1	191.0	10.5	60.6	190.0
1079	1	39.8	193.0	14.7	60.3	188.1
1041	1	43.1	194.8	14.5	60.3	187.6
719	1	42.0	193.9	11.6	60.3	189.1
1220	1	41.8	190.2	10.5	60.3	189.8
1478	1	37.3	191.1	8.9	60.2	189.2
400	1	38.9	194.4	12.0	60.1	186.8
1647	1	40.6	190.8	8.6	60.1	188.6
514	1	41.3	190.8	10.4	60.0	188.6
531	1	38.6	196.2	14.5	59.9	186.8
952	1	42.4	193.2	13.0	59.9	188.9
399	1	38.7	194.6	12.1	59.9	186.1
492	1	40.3	189.1	10.5	59.9	187.9
520	1	40.8	193.4	15.3	59.8	187.5
1176	1	40.7	187.6	14.0	59.8	189.0
1138	1	40.2	188.5	11.4	59.8	189.8
1137	1	40.7	193.6	12.0	59.7	188.5
981	1	41.4	193.6	9.2	59.7	188.6
274	1	38.9	190.9	16.0	59.6	188.4
1646	1	39.5	189.6	9.2	59.6	189.4
1633	1	40.3	189.4	8.0	59.6	187.7

RANKING OF ENTRIES BY LINOLEIC FATTY ACID PERCENTAGE

C.I.No.	Source	Oil %	IV	Linoleic	Linolenic	Sap Val
569	1	40.3	193.1	18.9	57.1	188.2
606	1	37.6	189.1	18.7	54.5	188.2
684	1	39.4	198.2	17.6	63.0	187.3
623	1	39.7	191.3	17.6	57.4	188.0
557	1	41.0	191.0	17.4	57.2	186.9
716	1	40.9	195.6	17.3	62.9	188.0
574	1	39.5	193.0	16.9	57.1	185.8
515	1	41.3	190.4	16.8	54.6	189.8
926	1	38.2	193.5	16.2	60.9	189.1
842	1	42.5	191.1	16.1	56.8	188.2
570	1	39.4	193.4	16.0	57.5	188.1
274	1	38.9	190.9	16.0	59.6	188.4
1019	1	39.7	177.2	16.0	53.6	189.6
1018	1	39.4	180.0	15.8	52.1	189.4
1127	1	41.1	195.3	15.7	61.2	189.0
522	1	38.4	193.2	15.7	57.1	188.5
873	1	37.1	191.6	15.7	58.0	188.8
576	1	39.2	190.6	15.7	56.4	189.0
1017	1	39.1	177.4	15.6	50.6	188.2
176	1	42.1	190.4	15.4	55.8	188.0
775	1	40.0	190.4	15.4	57.7	189.2
520	1	40.8	193.4	15.3	59.8	187.5
1028	1	39.7	192.6	15.3	58.9	187.4
642	1	42.1	193.6	15.2	62.6	188.4
1224	1	40.3	185.5	15.2	52.9	191.8
1229	1	39.7	177.9	15.2	48.4	190.8
446	1	38.9	189.2	15.1	54.8	188.2
637	1	41.2	196.6	15.0	65.5	188.5
715	1	39.4	191.8	15.0	56.7	189.7
1308	1	40.5	174.8	15.0	49.3	190.7
776	1	37.9	189.6	14.9	56.2	189.4
517	1	41.6	189.4	14.9	56.0	184.7
411	1	38.1	193.8	14.8	57.4	187.6
1079	1	39.8	193.0	14.7	60.3	188.1
1078	1	40.5	190.7	14.7	58.3	190.6
909	1	40.3	189.6	14.6	59.1	190.2
1117	1	39.6	188.0	14.6	56.8	184.0
1178	1	40.4	187.4	14.6	57.2	191.0
1223	1	39.8	182.6	14.6	54.4	185.0
1247	1	37.8	174.2	14.6	49.2	189.7

INVENTORY OF THE USDA-ARS FLAX WORLD COLLECTION

An inventory of the present Flax World Collection has been prepared utilizing the computer facilities at North Dakota State University (see page 23 for example). This facility has enabled immediate updates regarding condition and content of all entries as changes occur. On an average, two requests are received each month and number of entries requested range from 5 to 50.

The inventory lists the gram amount presently in storage, the year the entry was last increased, the germination percentage of the seed in storage, and the year the last germination percentage was determined. Germination capability of each entry will be determined every three years in the future. The minimum gram amount has been determined to be 100 grams and if the amount in storage is below that figure, the entry will be increased either at our winter nursery location or at Fargo, North Dakota. The minimum germination percent has been determined to be 75% and if below that figure, the entry will be increased.

INVENTORY OF THE USDA-ARS FLAX WORLD COLLECTION

C.I. No.	Grams	Year Increased	Germination %	Year Germination Tested	Comments
490	120		94	76	
492	135		76	76	
494	230		88	76	
498	300		83	76	
500	235		69	76	DEHISCENT
505	250		94	76	
506	115	75	95	76	DEHISCENT
507	215	75	94	76	DEHISCENT
509	155		81	76	
510	130		81	76	
514	135		92	76	
515	190		70	76	
516	260		99	76	
517	290		90	76	
518	500		83	76	
519	130		78	76	
520	175		87	76	
522	260		96	76	
523	260		93	76	
524	230		97	76	
525	200		79	76	
526	330		93	75	
528	150		70	76	
531	355		97	76	
532	570		94	76	
533	170		68	76	
537	205		89	76	
538	285		89	76	
543	220		90	76	
544	235		89	76	
547	120		83	76	
548	190		90	76	
550	215		97	76	
551	235		91	76	
552	275		92	76	
553	280		96	76	
554	136	75	96	76	DEHISCENT
555	350		79	76	
556	160		89	76	
557	145	75	96	76	

